

Molding and Casting Parts



DISCLAIMER

It is illegal to mold a commercial item
and then sell the castings

You can, however,

- Mold a commercial item and cast it for your own use
- Make your own masters, cast it and use or sell them

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Alumilite



Smooth-On

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Larry



This stuff can even be used for "Life casting"

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..did Duane to

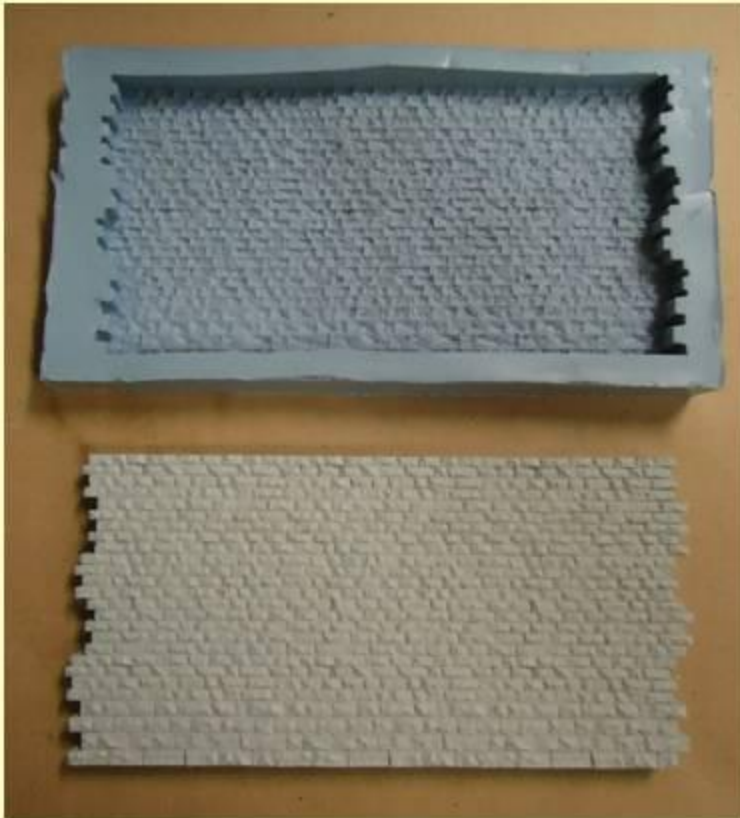


Here's Larry's casting



...and Mike

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Some items can be molded
in a single mold...



...Others require a
2-part mold

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We'll start with the simpler 1-part mold

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We'll use the car for this clinic

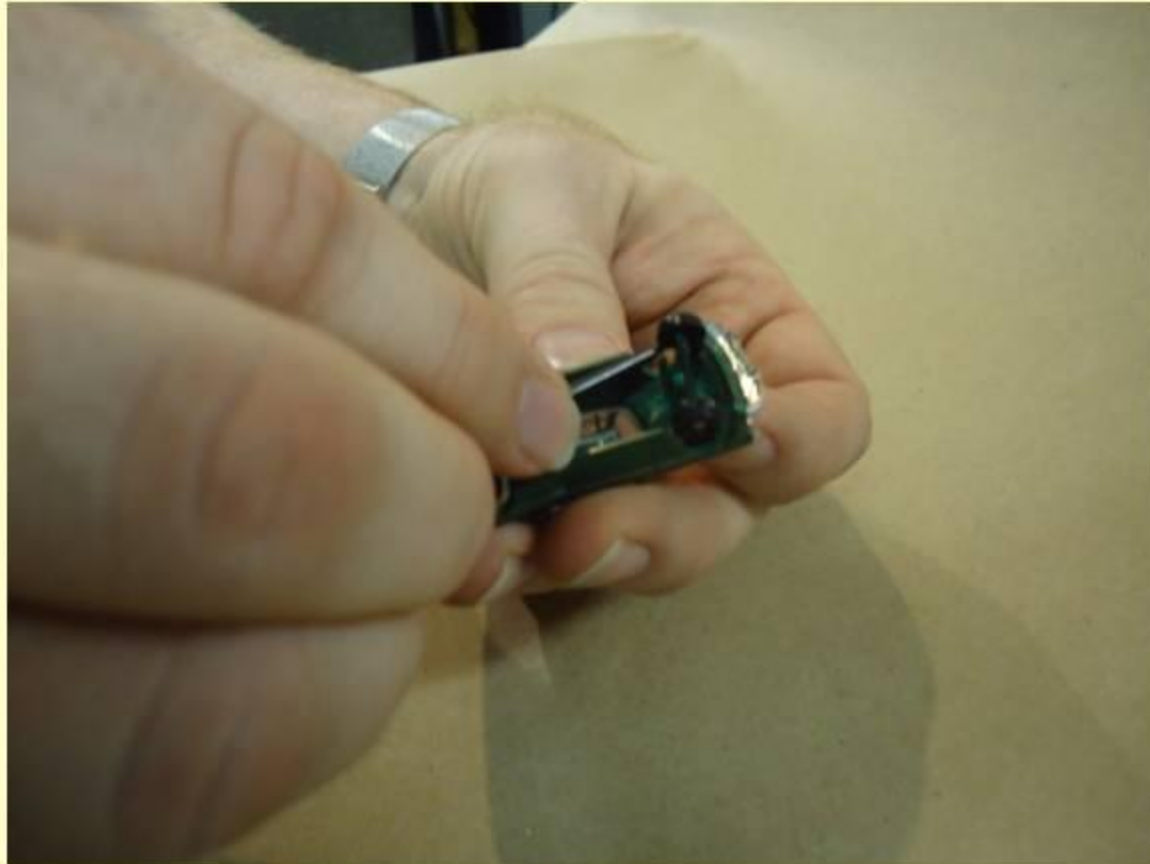


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We'll use the car for this clinic



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Start by preparing the master for molding
In this case, removing the wheels

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Then fill any void with modeling clay

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Next we shape any exposed areas
to shape the final master

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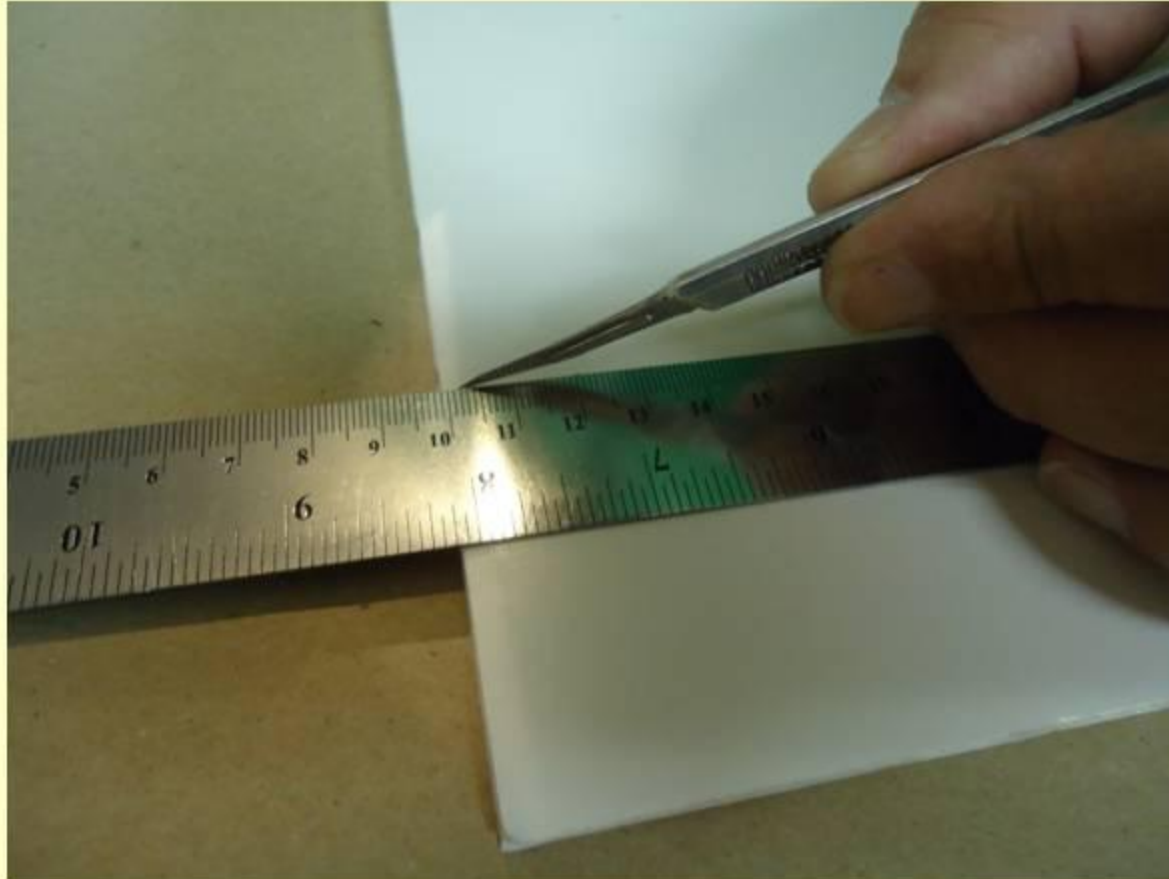
To build a box to contain the mold
First measure the height, width, and length of the master

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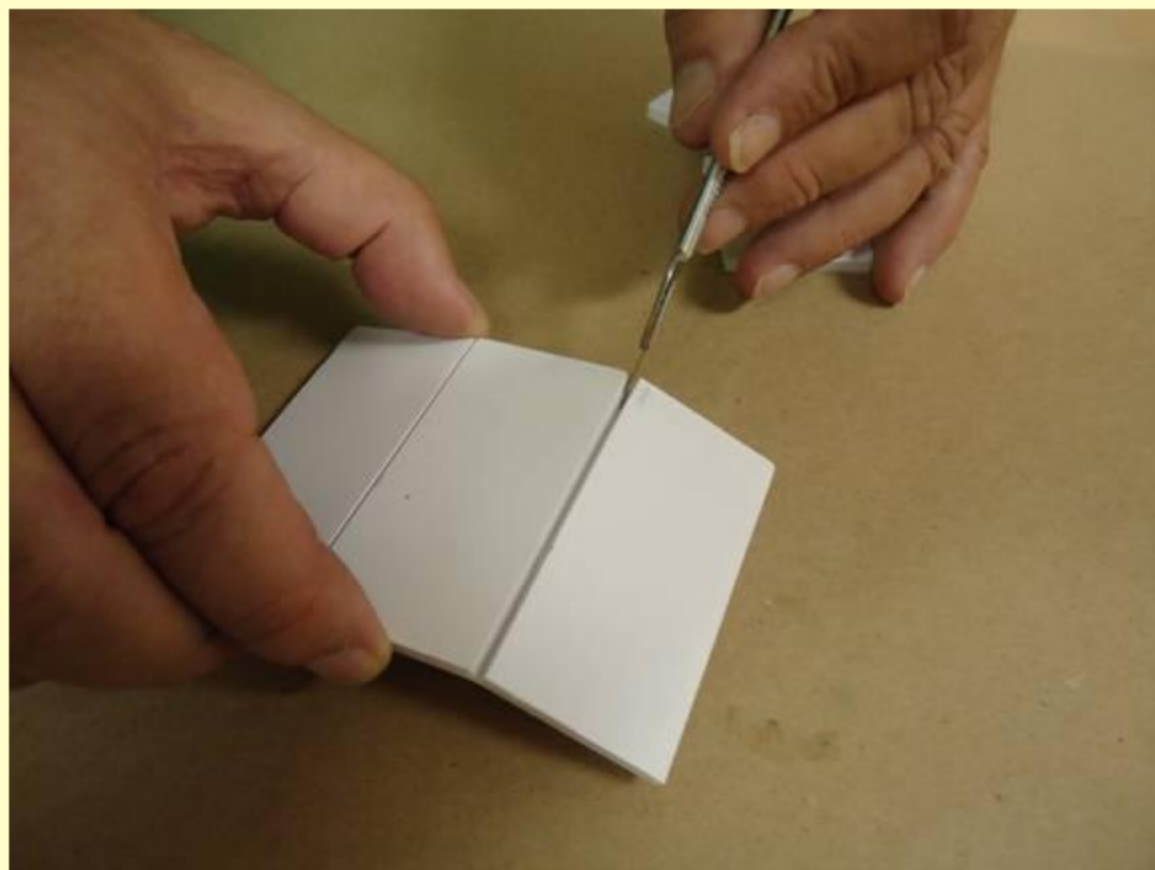
We'll make the box
 $\frac{1}{2}$ " longer, $\frac{1}{2}$ " wider, $\frac{1}{4}$ " higher
than the master

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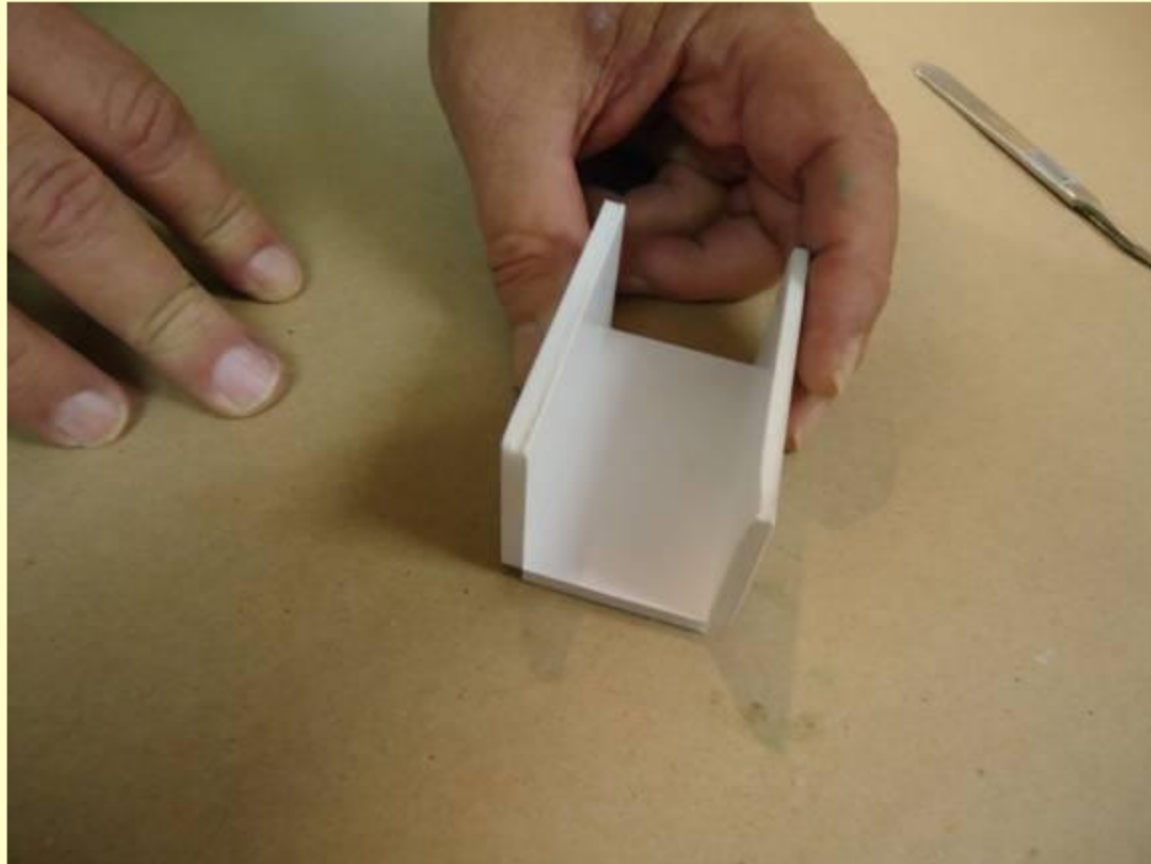
This gives us a $\frac{1}{4}$ " rubber layer
all around the master

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Cut a bottom, 2 sides, and 2 ends

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If you don't cut all the way through
you can fold up the sides

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Attach an end piece using tape
align the tape along the top of the box
and allow it to extend past the bottom

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When you're done it will look like this

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Now slit the tape in the corners and...

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Fold the flaps of tape over
to seal the bottom joints

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It's time to put the master
into the molding box

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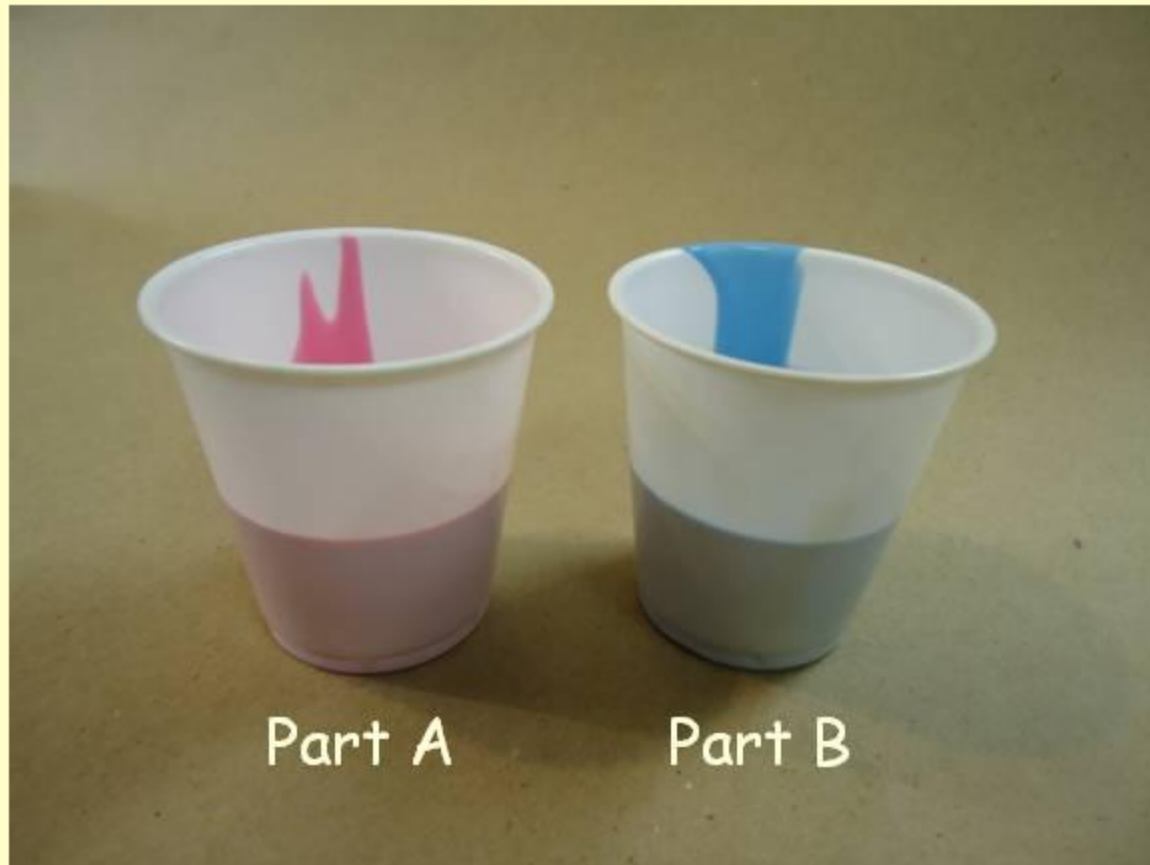
After applying a little dab of glue
place the master in position

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Gather the supplies

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Measure out equal parts

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Since Part A is thicker,
we'll start by scraping all of it into our mixing bowl

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Then add in all of Part B

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Start mixing thoroughly but try to minimize the introduction of bubbles into the mixture

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Mix to a uniform color with no streaks
You will have a 30-minute pot life

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Start applying the rubber by painting the master with a thin coating

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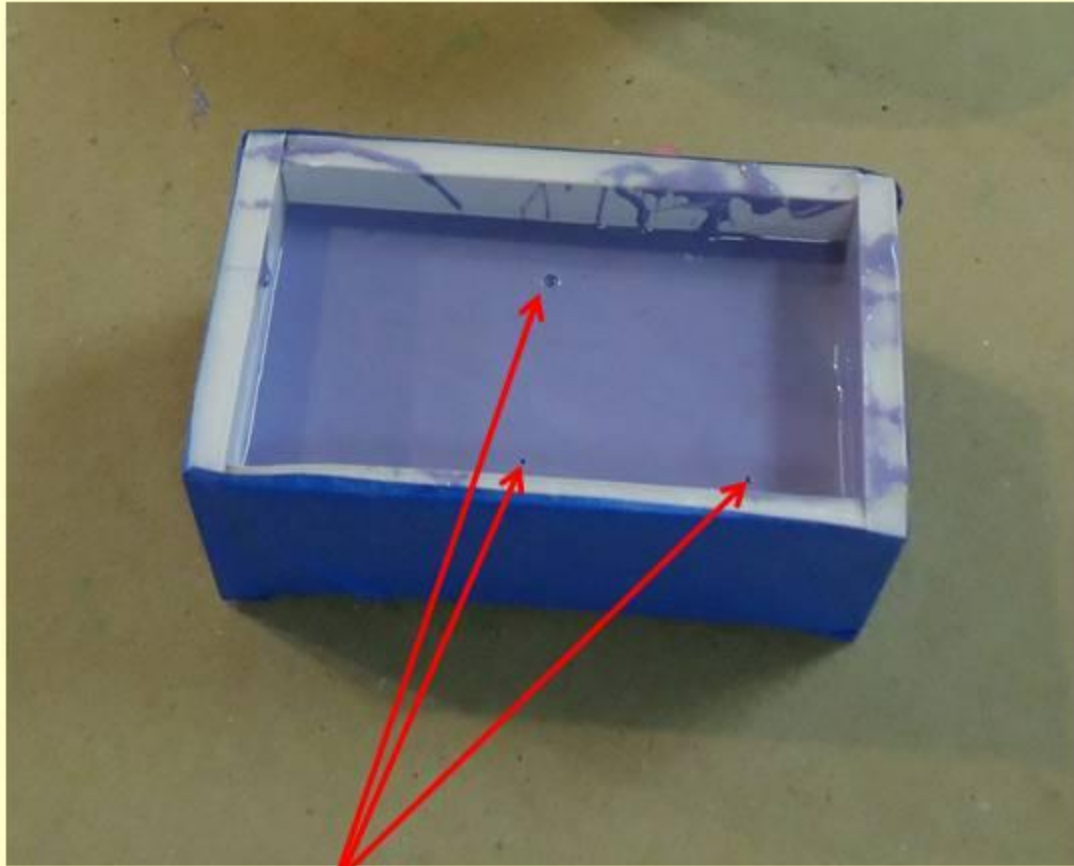
Cover the master completely
This helps eliminate voids in the mold

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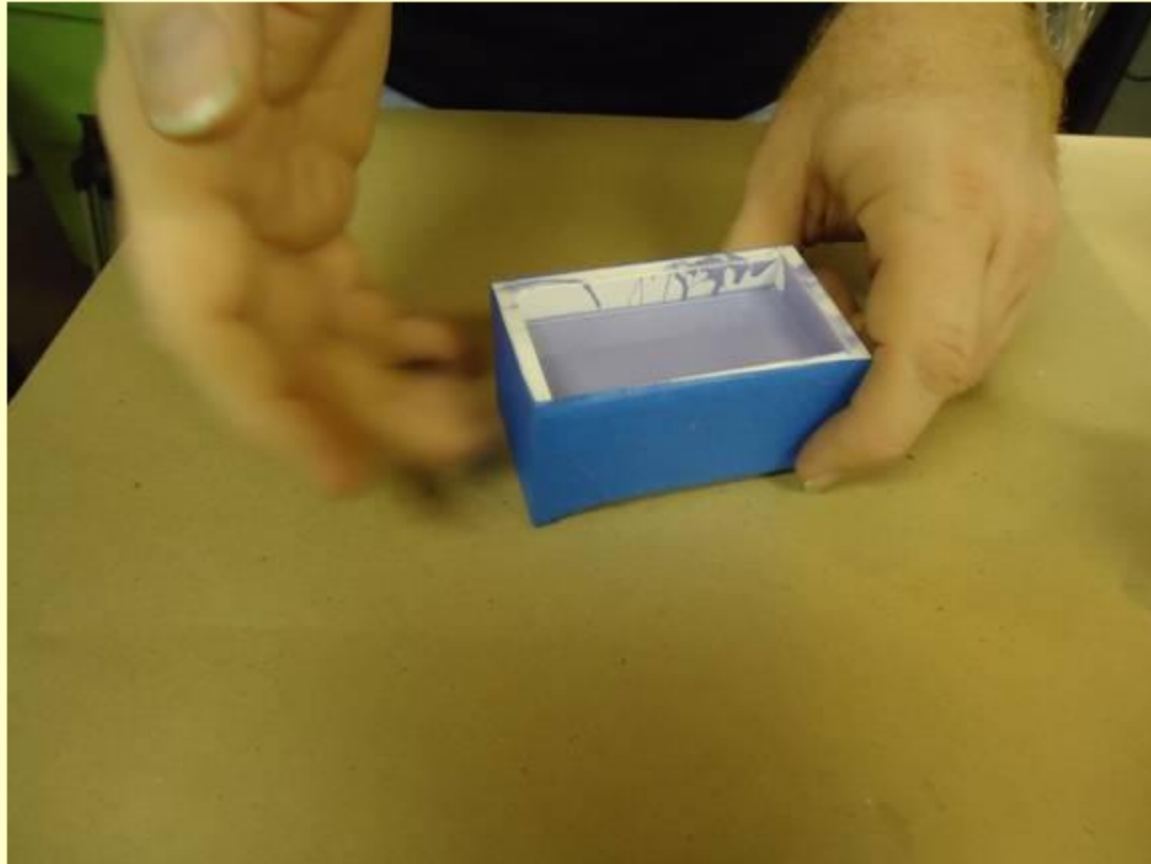
Then simply pour more rubber on top until you cover the master with $\frac{1}{4}$ " of rubber

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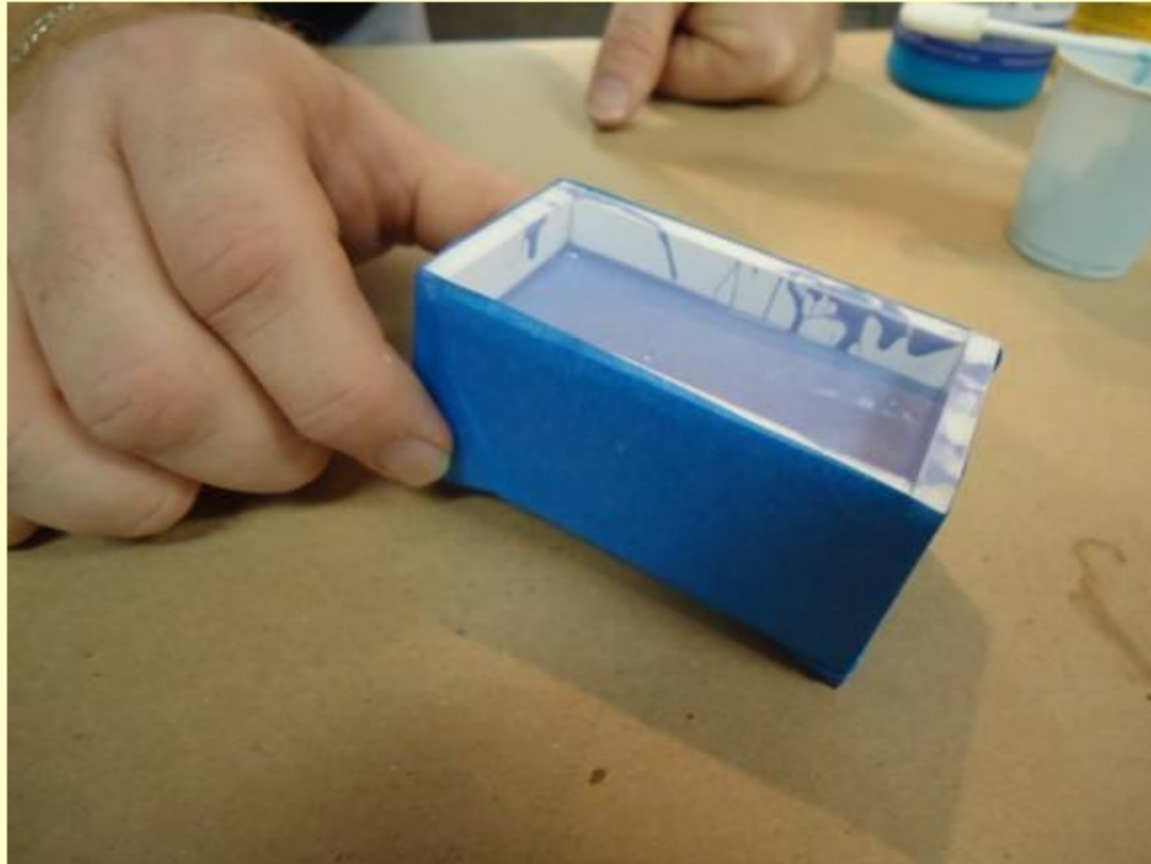
Some bubbles will exist and need to be brought to the surface

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You can tap on the box to cause a vibration and force bubbles to the top

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...or tap the box on the work surface

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... or, if you're really adventurous,...

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Now you just let it cure
OOMOO-30 will take about 6 hours

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Now for your homework!



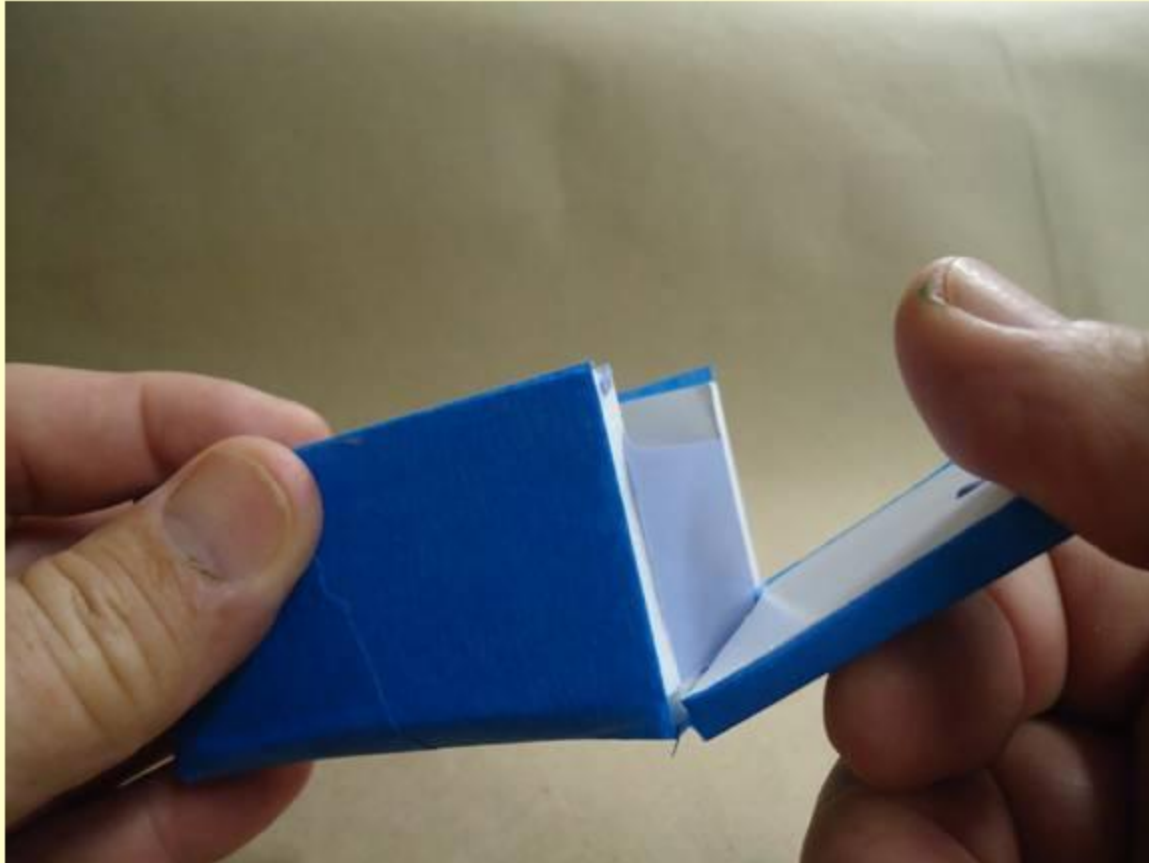
Once cured, cleanup is easy

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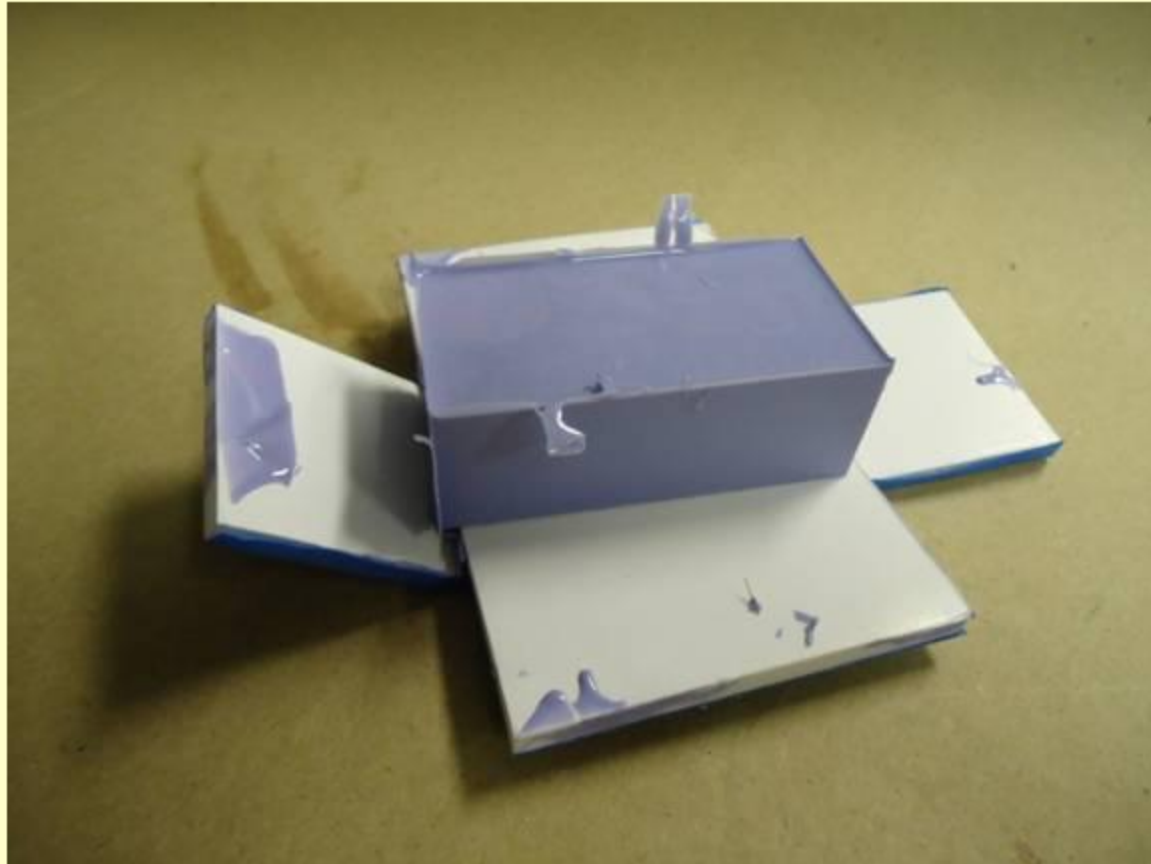
After the rubber has cured (maybe even wait until tomorrow)
Take a knife and slit the tape along the seams of the box

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Pull back the ends

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...and the sides

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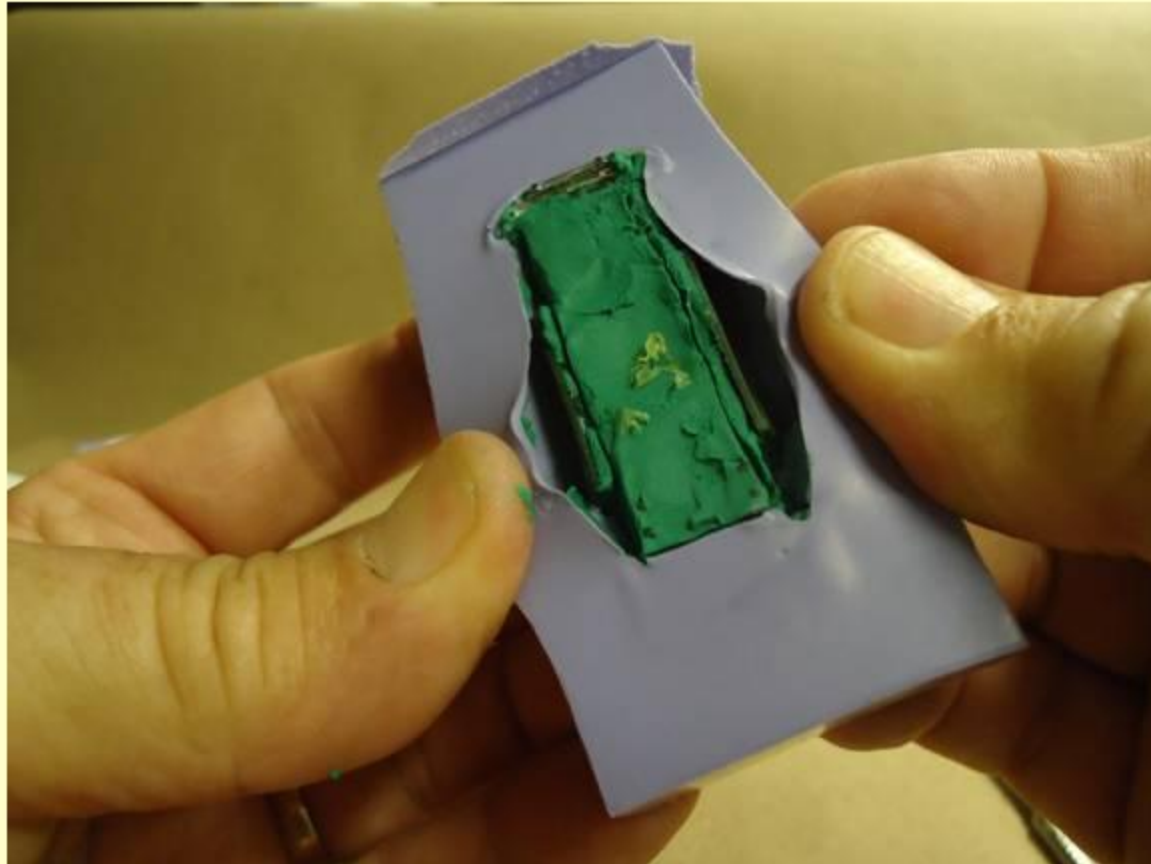
Then remove the box completely
Save the box it's reusable!

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If your master has floated
you will need to cut along the outline of it
and remove the rubber on the bottom

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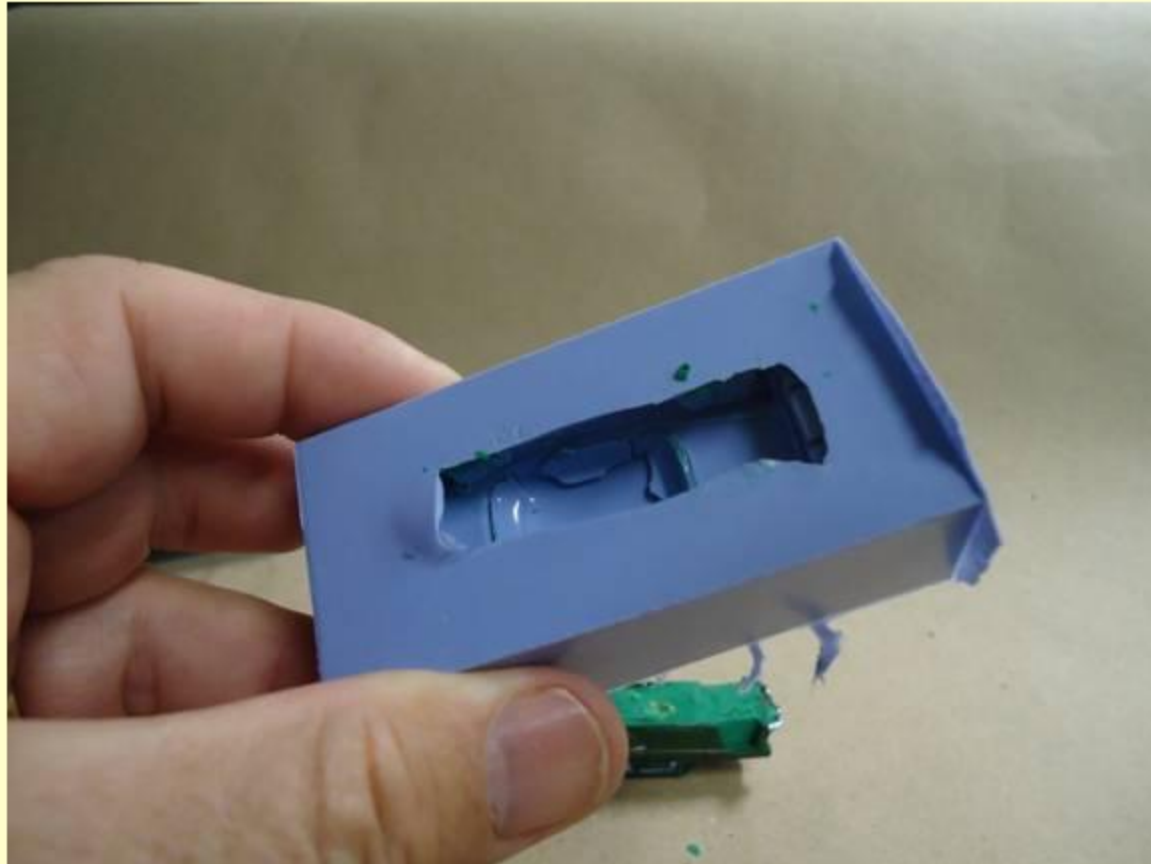
Then loosen the rubber from
the master on all 4 sides

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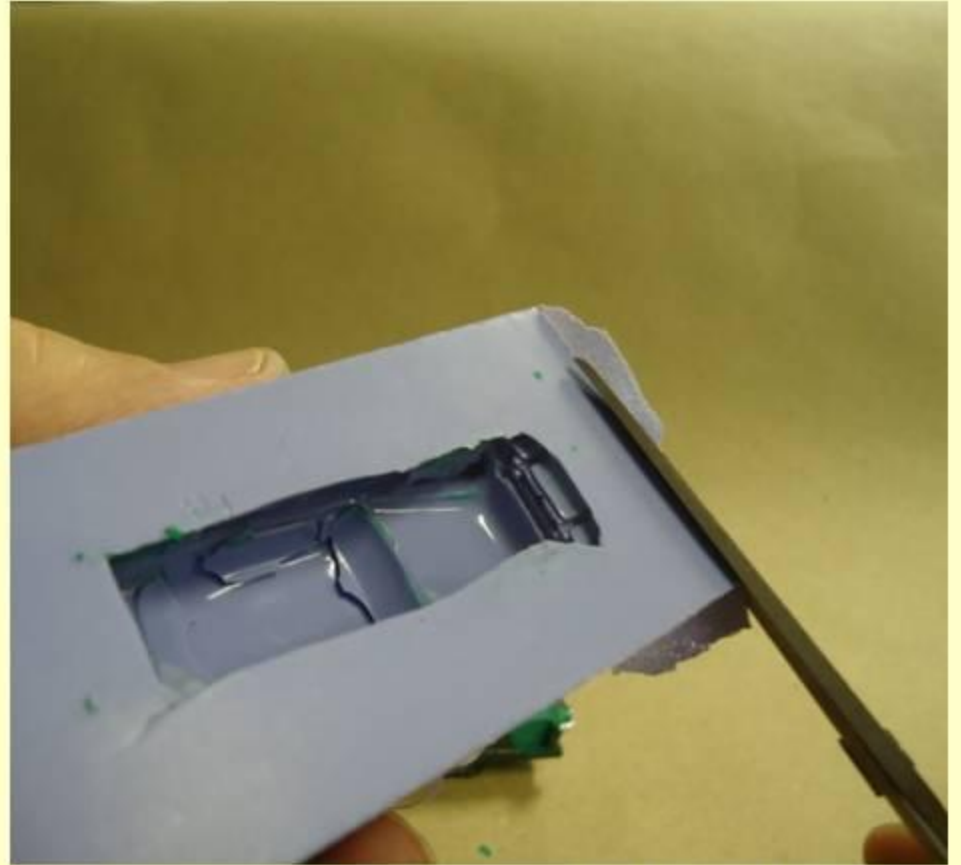
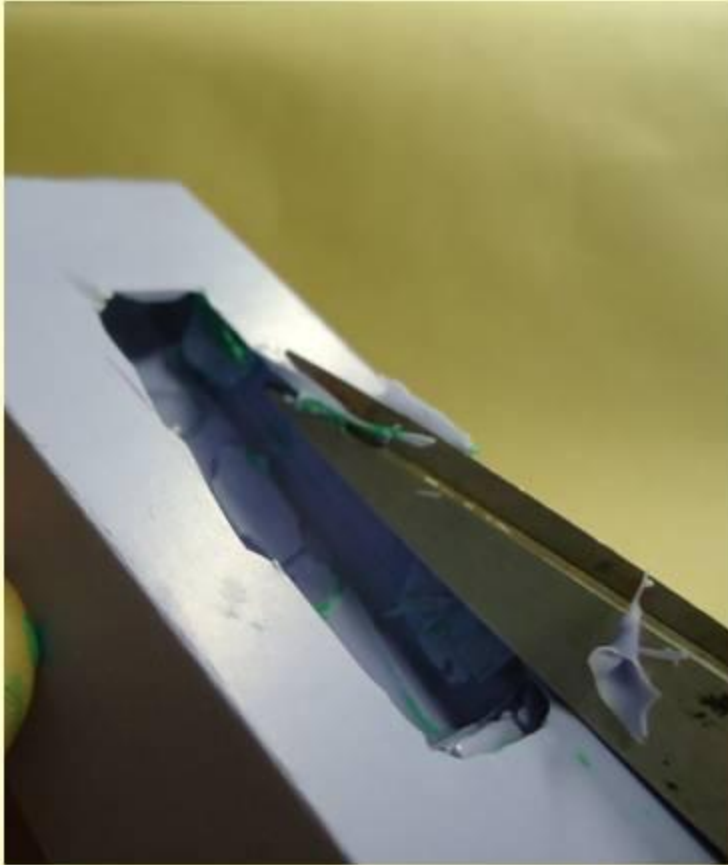
...and remove the master

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There will be some flash that will have to be removed

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You can use a small pair of scissors and/or a hobby knife

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Here's our trimmed mold

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Don't forget to remove the clay and restore the master to its original condition

